October 15, 2003

Massachusetts Division of Marine Fisheries (***MarineFisheries***)
Amendment 13 - Northeast Multispecies Fishery Management Plan Position Paper

Introduction

The New England Fishery Management Council will vote in early November on Amendment 13 to the Northeast Multispecies Fishery Management Plan. It will use public hearing comments and views of industry advisors, NOAA Fisheries, New England states, non-governmental organizations (NGOs), legislators, governors, mayors, and other governmental representatives to decide Amendment 13 alternatives for implementation on May 1, 2004.

The Council will rely on scientific/technical advice provided by NOAA Fisheries, state fisheries agencies, and other sources including its Scientific and Statistical Committee. Another important source of scientific/technical advice will be recommendations from a Peer Review Panel that critiqued NOAA Fisheries proposed biological targets (biomass) for all groundfish stocks (e.g., cod, haddock, and flounders in Gulf of Maine and on Georges Bank).

Three days are being devoted to this Amendment 13 Council final debate to be preceded by a special October Council meeting to review public comments. The deadline for those comments is October 15.

Being a voting member of the Council and a member of the Council's Groundfish Committee, *MarineFisheries* has been involved in all stages of Amendment 13 debate and development and is attentive to both expected socioeconomic and biological impacts of Amendment 13 alternatives. This is especially true regarding how these alternatives impact the Commonwealth's fishing communities that reflect New England's most diverse fleet characteristics including differences in vessel sizes, gear types, and areas fished.

Recognizing the dynamics of Council fisheries management and uncertainty of analyses for many Amendment 13 alternatives (even at this late date), *MarineFisheries*' position will be somewhat fluid to anticipate what usually happens at Council meetings when important decisions must be made. The Council likely will receive late-breaking analyses, new legal opinions, NOAA Fisheries' stances regarding Amendment 13 compliance with National Standards of the Sustainable Fisheries Act (SFA), and other information to be considered. Furthermore, the size of Amendment 13 and its complexity with its many alternatives and options within alternatives will require some flexibility by decision-makers responding to unanticipated developments and sequential decisions during three days of deliberations.

MarineFisheries Goal

Support alternatives that provide for steady, significant, and timely rebuilding of groundfish stocks within a stock-rebuilding framework, while seeking to maintain and sustain the diverse fishing industry so critical to the economy and culture of Massachusetts. To be successful, *MarineFisheries* must be responsive to views of the Commonwealth's commercial and recreational fishing industries on Amendment 13 alternatives to minimize socioeconomic impacts while implementing Sustainable Fisheries Act (SFA) National Standard requirements.

MarineFisheries Objectives

- At the November Council meeting adopt Amendment 13 with: (1) measures to reduce fishing harvest and mortality to levels associated with F_{msy} in a step-wise approach allowing: (a) flexibility to adapt to changes in fishery performance and (b) a better understanding of resource conditions, and (2) proper consideration to fleet diversity by not attempting to implement a "one-size fits all" approach.
- Strive to achieve most groundfish biomass levels currently preferred by NOAA Fisheries within ten years, but not immediately adopt those targets until correctness of assumptions behind them (e.g., recruitment) and rebuilding are evident.
- Avoid increasing discards and waste through regulations, and reduce current levels of discards.
- Protect groundfish habitat capable of providing substantial, widespread, three-dimensional bottom structure.
- Promote innovative fishing gear as a means of providing fishermen with fishing opportunities otherwise denied due to the complex matrix of complicated groundfish regulations tied to SFA mandates.
- Avoid Amendment 13 alternatives that decrease fishermen's safety at sea.
- Minimize potential for effort shifts to state waters due to federal waters' Amendment 13 restrictions.
- Avoid a shut down or prolonged closure of groundfisheries off the Commonwealth (such as in the Gulf of Maine, i.e., Massachusetts and Cape Cod Bays and adjacent state waters) resulting from attempts to manage a multispecies groundfish complex with single-species rebuilding requirements.
- Minimize impact of Amendment 13 on the Commonwealth's commercial fishing infrastructure and important businesses supportive and central to the Commonwealth's fishing industry (e.g., fish auctions and processing sector).
- Prevent explicit or implicit allocation of groundfish disadvantaging the Commonwealth relative to other New England states.
- Avoid alternatives that disproportionately impact the Commonwealth's inshore fishing fleet or disadvantage certain ports.
- Learn from past Council experiences with various groundfish management approaches to avoid repeating ineffective strategies (i.e., 1977-1982).
- Consider all effects on groundfish rebuilding especially changed environmental/climatic conditions and expected impacts of co-existing species, such as pelagics (sea herring and mackerel) that may limit recruitment and stock recovery of Georges Bank cod and other groundfish stocks.
- Manage Georges Bank groundfish shared with Canada consistent with mutually acceptable rebuilding objectives (e.g., targets and timelines), and prevent disadvantaging the U.S. groundfish fishing industry relative to Canadian fishing interests.

MarineFisheries Preferred Alternatives

Recreational Fishing Measures (pages I-102 & I-178)

MarineFisheries believes that the Council's recreational fishing permit preferred option 2 (any recreational vessel possessing regulated multispecies in the EEZ is required to have a federal permit) will not be of benefit to the recreational fishing community nor would it contribute to stock rebuilding. We support Option 1(no action): a recreational vessel is not required to obtain a permit.

MarineFisheries supports a slightly modified Option 3. Option 3 keeps minimum sizes the same as the commercial fishery (22" cod and 19" haddock). It provides for a year-round 10-cod/person/day limit for private recreational fishermen regardless of where they fish. There is no bag limit for haddock. Currently, the limit is 5 fish from December 1 – March 31 with 5 haddock also being allowed. At other times, recreational fishermen are allowed a 10-cod/haddock limit.

Option 3 provides the same opportunities for party/charter vessels in the Gulf of Maine: year-round 10 cod/person/day with no bag limit for haddock. Currently, party/charter vessels do not have a bag limit for haddock. They are subject to a Gulf of Maine 10- and 5-cod bag limit from April-November and December-March, respectively.

MarineFisheries recommends the cod bag limit (10 cod/person/day) apply to all areas and not just the Gulf of Maine given the poorer status of Georges Bank cod relative to Gulf of Maine cod.

MarineFisheries supports the Option 3 provision: "For the purposes of recreational and party/boat fishing vessels, any trip in excess of 15 hours and covering two consecutive calendar days will be considered more than one day."

MarineFisheries also supports continuation of the Settlement Agreement provision: "Vessels intending to party/charter fish in Gulf of Maine closed areas must declare into this fishery for the duration of the closure or for three months, whichever is greater."

Numerical Estimates of Status Determination Criteria (page I-22) – Reference Points (Biomass Targets)

Marine Fisheries' preference is Option 2 – Step increase.

Rationale

There are three options with the second option being the most sensible. It enables the Council to increase biomass targets progressively and in a step-wise fashion by 25% each time a target is achieved while restricting effort and catch to achieve a fishing mortality rate (F) assumed to produce a maximum sustainable yield (F_{msy}) or consistent with a "phased-F" approach. Increases will occur automatically and without delay.

If Council monitoring of its rebuilding progress reveals step increases are not being achieved in a timely way, and it's determined that fishing mortality targets (either F_{msy} or a phased-F) are being markedly exceeded and are responsible for lack of progress, the Council will have to adjust measures (e.g., DAS) to achieve rebuilding (described below).

With this "step increase" approach the Council relies on reducing fishing mortality as the best way to recover/rebuild groundfish and doesn't get enmeshed in a complicated and untested approach for evaluating and resetting targets. The Northeast

Fisheries Science Center in public statements has made a similar point regarding a focus on mortality.

For example, for Gulf of Maine cod the current biomass target is 22,100 metric tons (48.7 million pounds). Set the new target at 27,625 mt and "hold" F to F_{msy} – or at somewhat higher initial F consistent with the "phased-in fishing mortality reduction" strategy (discussed below). Because the projection of GOM cod abundance indicates this biomass target will be reached in 2004, the target automatically will increase to 34,531 mt at that time. Projections indicate this stepped, higher target will be reached in 2005. The target automatically will increase to 43,164 mt – a target to be reached in 2006 or 2007. If all goes as expected (i.e., recruitment of young fish and environmental conditions are favorable), stepped biomass targets will be achieved well before 10 years (or 5 years) for each successive target. Importantly, if biomass projection assumptions prove incorrect, the Council is not legally required to reach unattainable targets.

NOAA Fisheries' preferred option (Option 1) is to set biomass targets at levels recommended by the so-called GARM (Groundfish Assessment Review Meeting) – a "regional peer review process" used in 2001. A special Peer Review Panel of scientists from the United Kingdom reviewed these high targets. The Panel's conclusions are summarized in the attached *MarineFisheries* newsletter. The Chairman of the Panel summarized the Panel's conclusions at a Council meeting. He said, "Don't adopt an overly optimistic position [on targets]." "There is huge uncertainty as to where the B_{msy} [biomass target] is." "There is extreme uncertainty about the right-hand side of the stock-recruitment curve."

With Option 2 the Council will not have to somehow convince the federal government that targets initially set very high (in *terra incognita*, i.e., not witnessed in modern times as acknowledged by the Northeast Fisheries Science Center), should be lowered. Once targets are set high, it will be very difficult to lower them "adaptively" (according to the federal approach), as scientific uncertainty likely will be large enough to oblige the federal government to keep them high. *MarineFisheries* has raised this issue with the Council, and the Council formally has requested NOAA Fisheries for details of its adaptive management approach (i.e., how will it work in actual practice). Answers have not been provided yet.

MarineFisheries doesn't argue targets are wrong. Option 2 simply is a far more pragmatic approach for determining how high we can rebuild, and it hedges against a reliance on rebuilding assumptions that very well may prove to be incorrect. Also, consider that with the practical step-wise escalation of biomass targets, GOM cod was not overfished in 2001. With NOAA Fisheries' approach the stock was overfished. Clearly, this has implications for rebuilding timelines and paints an entirely different picture of fisheries managers' record of success and failure. While there has been some success, enhanced performances are important and necessary to further increase yield and greatly improve stock status. The major concern is to keep fishing mortality low, and stocks will grow.

Consider that Georges Bank cod and haddock biomass targets urged by NOAA Fisheries are 216,800 mt and 250,300 mt, respectively and replace current targets of 83,500 mt and 105,000 mt. Setting these high targets immediately is ill-advised. For example, for Georges Bank cod, the high target is based on a time period when abundance from Georges Bank to the west and south (southern New England and mid-

Atlantic areas) was high. Those fish are no longer in those areas (perhaps due to changed environmental conditions) so recovery to a very high target will be challenging if it can occur at all. The "Georges Bank" 216,800 mt target derives in part from cod found in the past from Southern New England and in the Mid-Atlantic. For this reason alone, setting a very high target is inappropriate. Georges Bank management measures proposed in Amendment 13 focus on just Georges Bank (east of Great South Channel off Chatham and Nantucket).

Federal scientists in published papers in scientific journals have concluded that highly abundant planktivorous fish (plankton/fish egg & larvae-eating) likely impose a consistent source of mortality on larval cod and haddock. They highlighted the possibility that pelagic predators could limit the recruitment and stock recovery of cod and haddock on Georges Bank. Currently, these pelagic predators (herring and mackerel) are extremely abundant in the Georges Bank ecosystem. In fact, the Northeast Fisheries Science Center has concluded Georges Bank sea herring may be at its carrying capacity (its maximum).

NOAA Fisheries offers an "adaptive management approach" that sets targets high initially, then lowers them if time and further analyses prove their targets to be wrong (see our attached July 4 letter to Council Chairman Tom Hill regarding this approach). If targets are proven wrong, they would have resulted in unnecessary socioeconomic hardship.

Additionally, Amendment 13 has a procedural roadblock. The Council's "adaptive management action table," describing circumstances warranting a consideration of target changes, does <u>not</u> allow consideration of lowering biomass targets if in 2008 (4 years into rebuilding) F is greater than the F_{msy} value (0.23 for GOM cod) and biomass is less than a biomass "waypoint." This is a very possible scenario because the F target will be low and the biomass target will be relatively high (over 50,000 mt). No change can be considered; the high target will remain (i.e., 82,800 mt); the action table assumption will be "current management measures are ineffective;" and more restrictions will be required.

Strong justification for *MarineFisheries'* preferred option is provided in Amendment 13 (pages I-29-30). This option provides what NOAA Fisheries' option cannot: *"While this approach [NOAA Fisheries' adaptive] to biomass targets may make sense from a biological standpoint, it does not take into account Magnuson-Stevens Act requirements to <u>balance biological, social, and economic objectives</u> (emphasis added). The economic and social analysis in this document clearly demonstrate significant impacts on fishermen and coastal ports as a result of management measures designed to achieve the proposed biomass targets. In particular, the short-term impacts show large declines in fishing vessel revenues compared to the No Action alternative in the initial years of the rebuilding programs. Break-even analyses show that many vessels will not earn enough groundfish revenues to cover costs. While the choice of rebuilding period and rebuilding strategy can affect these impacts, basing management measures on strategies designed to achieve biomass targets that ultimately may prove to be unattainable may have <u>severe, irreversible impacts on communities and the public that rely on commercial and recreational fishing</u> (emphasis added)."*

Rebuilding timeline (page I-53)

MarineFisheries prefers Option 2 – ending date of 2014 for most stocks except for Georges Bank cod, Cape Cod/GOM yellowtail, and Acadian redfish with longer rebuilding periods.

Rationale

NOAA Fisheries strongly favors very high groundfish biomass as targets for rebuilding, and these targets are double or triple current values necessitating additional time for rebuilding. In the case of Georges Bank cod, Cape Cod/GOM yellowtail, and redfish, for a variety of reasons, more time is needed to prevent years of fisheries closures and considerable socioeconomic impact. Some of those reasons detailed in Amendment 13 would be prolonged and unexplained poor recruitment and slow stock growth.

For example, yellowtail flounder apparently cannot be rebuilt to a very high biomass target by 2014 unless fishing mortality is kept to (an impossible-to-achieve) 0.08 (about 7% removal of total stock each year due to fishing). Amendment 13 states: "…could only be achieved if all fishing – including fishing for non-groundfish species such as scallops – is stopped in the Cape Cod/GOM yellowtail stock area [all GOM]. This rebuilding mortality is effectively zero…"

Rebuilding Trajectories for Overfished Stocks (page I-54)

MarineFisheries prefers Option 2: Phased fishing mortality reduction

Rationale

The setting of very high target biomasses and the setting of correspondingly low fishing mortality rates to achieve those biomasses (F_{msy}) will result in an immediate need to significantly reduce fishing mortality for about eight species/stocks. In some cases, decreases are so large, they're infeasible if they must be achieved immediately – unless the Council is willing to accept immediate, severe, and potentially irreversible impacts on communities and the public that rely on commercial and recreational fishing.

MarineFisheries supports these significant reductions in fishing mortality in a phased-in fashion described in Amendment 13. However, for those species/stocks where current 2002-03 fishing mortality is found to approximate F_{msy} values, *MarineFisheries* prefers immediate adoption of F_{msy}.

The phased-in fishing mortality reduction alternative when combined with the option 2 step increase in biomass targets provides for steady increases in biomass with timely reaching of many successive and increasingly higher biomass targets. For example, with F assumed to be 0.36 in 2002 and 2003 and then being set at 0.32, 0.29, and 0.27 in 2004, 2005, and 2006, respectively, GOM cod biomass is projected to reach almost 40,000 mt by 2006. This is a highly desirable outcome with removals due to fishing averaging about 24% from 2004-2006.

To gauge the effectiveness of this approach, timely evaluation of mortality levels and monitoring biomass changes will be essential. Accordingly, the Council must be prepared through framework actions to strengthen rebuilding measures to maintain its schedule for steady, significant, and timely rebuilding.

As it now stands, according to Amendment 13 stock rebuilding projections calculated either with F_{msy} or Fs associated with a phased-F approach (pages 230-245), all stocks achieve biomass targets by 2014 except for Georges Bank cod, redfish, and Cape Cod/GOM yellowtail. There is steady rebuilding.

For the following reasons, the phased-in fishing mortality reduction approach is far better than immediately requiring mortality on Cape Cod/Gulf of Maine yellowtail to be no higher than the very low 0.17 (F_{msy} value or about 15% annually).

1) According to federal scientists, fishing mortality on this stock of yellowtail is very high – 0.95 or 57% removal of stock each year due to fishing. With a federally preferred biomass target of 12,600 mt (compared to current 5,250 mt), Amendment 13 total allowable catch (TAC) might be as low as 235 mt (517,900 pounds). Amendment 13 analyses predict that 70% of this TAC will be taken in less than one week, unless mechanisms are in place to prevent such an outcome. As yet, no such mechanisms have been identified. Implications of this low TAC are very serious. Fishing in the Gulf of Maine with all gear capable of catching yellowtail will be prohibited or possession of yellowtail will be prohibited. If the former, almost all groundfishing will be prohibited for almost the entire year in the Gulf of Maine. If the latter, fishing will continue for other species, and large amounts of yellowtail discards will occur. Yellowtail is still abundant, and it will be caught unavoidably. Spawning stock biomass in 2001 was over 3,177 mt. Consider that total 2001 catch was estimated to be 2,988 mt in 2001. This assessment conclusion should be revisited (almost all SSB was caught that year). Furthermore, scientists concede, "lack of contrast [variability] in the recruitment time series limits the perception of SSB_{msy}." In other words, the potential productivity of the Cape Cod/GOM stock is uncertain.
2) According to the GARM, in its "Summary of Assessment Advice and Management Implications," "The case of Cape Cod yellowtail remains enigmatic, in that the apparent mortality rates on the stock remain exceptionally high despite reductions in F seen in co-occurring stocks (e.g., Gulf of Maine cod and winter flounder)…" Without our having a clear understanding as to why mortality is so high relative to this other co-occurring stock, we jeopardize the Commonwealth's entire GOM groundfishery for the sake of just one species in the multispecies complex.
3) The current target is 5,250 mt. A higher target, such as 8,400 mt, is appropriate. Now, as reported in the January 2003 Advisory Report on Stock Status, the target has jumped to 12,600 mt largely because scientists have combined all Gulf of Maine yellowtail with the Cape Cod stock, although arguments for this action are not strong. The "stock" now encompasses all area from the mouth of the Bay of Fundy to Nantucket Shoals. This is a large area, and Amendment 13 development did not anticipate this change in stock boundaries or the dramatically increased biomass target (over 100% increase).

MarineFisheries suggests National Standard Guidelines can and should be used to mitigate the requirement to immediately decrease fishing mortality to 0.17 for Cape Cod/GOM yellowtail each year for the next 10 years at a minimum. On page 24221 of the May 1, 1998 Federal Register, NMFS indicates its willingness to allow overfishing on one stock in a mixed stock fishery under certain conditions.

These conditions appear to be met in the case of Cape Cod yellowtail (e.g., at least 11 months of closure affecting trawling, gillnetting, and scalloping). NMFS stated: *"…NMFS infers that Congress did not mean to eliminate entirely the longstanding*

practice of allowing a mixed-stock fishery to continue, if certain conditions specified in the guidelines were met…To allow overfishing of one stock in a mixed-stock fishery, a Council must meet three stringent conditions…"

MarineFisheries believes those conditions meet Congressional intention that NMFS has correctly inferred; i.e., Congress requires optimum yields (OYs) to be achieved from each fishery. That requirement will not be met if fishing for groundfish in the GOM is stopped to prevent overfishing of one stock in the mix.

MarineFisheries prefers Option 2 instead of Option 3 (NOAA Fisheries Adaptive Rebuilding Strategy) because Option 3 has a major drawback in addition to the "procedural roadblock" described above. Option 3 emphasizes keeping fishing mortality below F_{msy} immediately upon implementation of Amendment 13. The Amendment states (page I-61): "…attaining fishing mortalities at or below these rates [F_{msy}] is the cornerstone of this option…"

On its face, this Option 3 approach seems sensible. However, it potentially will prevent achievement of OYs for many stocks in the multispecies complex because stocks have different F_{msy} values. To not exceed a low OY for one stock, a fishery closure affecting all stocks would be necessary (e.g., entire Gulf of Maine). Consequently, larger OYs and TACs for other stocks (corresponding to higher F_{msy} values) would not be taken. Unfortunately, at this time, conservation-engineered (modified) fishing gear are not approved or available to allow fishermen to take all proposed TACs much higher than for some stocks (e.g., Cape Cod/GOM yellowtail) caught in the multispecies complex.

Furthermore, Amendment 13 is uncharted territory. It's very likely fishing mortality will be higher than F_{msy} for some species for at least the first year of Amendment implementation due to a number of factors including: regulatory discards (discards caused by regulations); the low value of most F_{msy}'s; the complexity of the management program; measures being less effective than anticipated; the new days-at-sea leasing provision (assuming it's adopted); and untested excess capacity controls.

Part of our support for the phased-in fishing mortality reduction approach (Option 2) is the NOAA Fisheries-proposed revised F_{msy} values linked to the high SSB_{msy} targets. To get to the spawning stock biomass providing for theoretical maximum sustainable yields (as opposed to many other sustainable yields shy of the maximum), these F_{msy} values must be maintained. We question whether decreased F_{msy} targets can be met immediately.

Review of Status Determination Criteria (page I-42)

Evaluation of these criteria must await a response to the Council's request for the Northeast Fisheries Science Center for additional detail. Without a clear understanding as to how this approach will work in practice, the Council cannot determine if the strategy has unacceptable consequences. Given the high biomass targets set by NOAA Fisheries, unwarranted, widespread, and prolonged fisheries closures could result by driving required fishing mortality down to single digits or even zero.

United States/Canada Resource Sharing Understanding

Canada has not and might not agree to high biomass and low fishing mortality targets as part of the U.S./Canada Resource Sharing Understanding for key groundfish species on Georges Bank and in the Gulf of Maine. The consequences of Canada not

agreeing to NOAA Fisheries-preferred targets are inadequately described in Amendment 13. Details must be provided.

Assuming Canada does accept these targets, we realize U.S. fishermen will share cod and haddock with Canadian fishermen in a portion of Georges Bank based on stock-specific hard TACs. There appears to be no other viable choice to cooperatively manage cod, haddock, and yellowtail flounder in these specific areas. Fishery closures after the U.S. has taken it shares seem inevitable and necessary. Consequently, although *MarineFisheries* is unconvinced widespread application of hard TACs is a wise approach, in this particular circumstance to successfully administer the U.S. share for these species, hard TACs would seems to be the best choice.

Sector Allocation (page I-110)

MarineFisheries supports the concept of sector allocation as an option to be considered in addition to and independent of the principal Amendment 13 management options. The time is ripe for fishermen to band together to creatively preserve fishing opportunities and lessen the severity of restrictions they otherwise might be forced to accept. As Amendment 13 states: *"The motivation to form or join a sector could be for several reasons: a desire of its members to consolidate operations in fewer vessels; assurance that members would not face reductions in catch or effort as a result of actions of vessels outside the sector (e.g., if other vessels exceed their target TACs), and potentially, freedom from restrictive regulations not needed to meet conservation objectives if the sector is constrained by a hard TAC (e.g., trip limits and potentially some time-area restrictions).*

The future of New England groundfish management will rely on creative solutions to complex problems. Those solutions will be easier to develop with sector allocations that will motivate fishermen to change their fishing behaviors, adopt more conservation-minded measures than required, and develop/apply fishing gear to further minimize bycatch/discard and impact on bottom habitat.

Because formation of a sector will be a formidable task for any group of fishermen, *MarineFisheries* strongly recommends that NOAA Fisheries and the Council have a far greater role in assisting fishermen develop proposals and operation plans. We must strive to create incentives that reward fishermen who are willing to implement proactive and progressive management strategies and who are willing to conduct fishing activities that may exceed basic expectations of the FMP, as these actions will likely pioneer the development of avenues to better future management applications. As it stands now, Amendment 13 puts the burden squarely on the shoulders of fishermen to develop proposals and operation plans. This is an unrealistic expectation, especially because the sector(s) will be obliged to write its own "appropriate NEPA document assessing the impacts of forming the sector."

MarineFisheries recommends adoption of option 2 "Periodic Adjustment Process" for "Sector Review and Approval" (page I-111). The other alternative minimizes if not almost entirely removes Council involvement. That outcome is unacceptable because it removes states' marine fisheries agencies from this process that centers on allocation. For example, in the so-called "streamlined approval process" NOAA Fisheries advises the Council "of any changes in resource allocations that result due to approval of the sector."

Furthermore, *MarineFisheries* supports: option 3 for "Movement Between Sectors" (page I-111). This option allows for each sector to set their own rules on movement. It contrasts with option 1 (open movement between sectors on a fishing year basis) and option 2 (multi-year commitment for participation within a sector).

Georges Bank Cod Hook Sector

Consistent with the aforementioned position on sector formation, *MarineFisheries* strongly supports this sector as described on page I-114. Hook fishing for cod on Georges Bank through a hard TAC seems the best way to address this sector's concerns. This sector approach may provide for some profitable cod fishing in the face of likely very restrictive Georges Bank annual TACs set low for rebuilding and sharing with Canada. What appears to be a series of below average to poor year classes for Georges Bank cod suggests many years of restricted catch. Smaller vessels fishing with hooks and presumed low bycatch and discard, require some special considerations favoring this gear type over others, such as standard bottom trawls and gillnets.

MarineFisheries considers this use of a hard TAC to be a special case with limited application. Furthermore, *MarineFisheries* considers this sector, if approved, to be in place on May 1 when Amendment 13 is implemented. Since specifics are defined and rules are clearly specified we believe it will be inappropriate and inconsistent with Amendment 13 as proposed to require this already-identified sector to develop an (expansive) operations plan for review.

Georges Bank Cod Gillnet Sector

It would be difficult to support this sector as described on page I-115. In particular, there are six different limits on amount of gillnet gear that can be set depending on target species and whether gillnetters are day or trip vessels. This sector must be better defined and evaluated as to enforceability of its gear rules. Moreover, no trip/possession limits are defined.

Hook/Gillnet Sector Georges Bank Closed Area I Access Program

MarineFisheries supports this access program for hook fishing only to allow increased access to haddock that can sustain high catches and landings.

A 400-pound/trip cod bycatch provision (September 16 – December 31) should not be allowed as a piggyback limit on top of the Georges Bank cod hook sector trip/possession limit of 600 pounds/day during that time period. Vessels potentially could land 1,000 pounds caught from inside Closed Area I and claim 600 outside and 400 inside. This situation will pose a dilemma for enforcement.

Special Access Programs (page I-85)

MarineFisheries supports Option 2 for Special Access Programs (SAPs) as a sound mechanism: "to facilitate access to groundfish stocks that can support an increase in mortality and to facilitate management of and access to non-groundfish stocks."

The Council needs to be cautious not to complicate SAPs by overemphasizing the need for habitat protection in areas primarily of mud, sand, or gravelly sand. Areas of gravel characterized as "granule-pebble" do not warrant "protection" from bottom-

tending gear. Calling these areas "gravel" will lead to misunderstandings as to what habitat should be protected.

For this reason, special care should be given to consider only habitat protection alternatives that truly will protect important EFH, i.e., habitat providing widespread three-dimensional structure. Otherwise, areas that may warrant future special access will become inaccessible due to an inordinately precautious approach for protecting EFH. To leave options open for SAPs - especially for trawl-caught yellowtail flounder and to facilitate the taking of the U.S. share of cod, haddock, and yellowtail flounder under the U.S./Canada Resource Sharing Understanding - the Council must not adopt any alternative "to minimize adverse effects of fishing on essential fish habitat" that will unnecessarily prevent bottom trawling.

SAPs will involve conservation-engineered fishing gear or existing gear with additional restrictions such as increased net mesh size. The use of *MarineFisheries'* raised-footrope trawl design or its refinement – the sweepless trawl should be explored. These designs will minimize catch of flounders but allow catch of more off-bottom species.

However, these trawls should be required only for special circumstances because other bottom species will be unavailable with use of this trawl (e.g., skates, winter flounder, dabs, witch flounder, etc.). For this reason the Council should not require the raised-footrope trawl in large expanses of the Gulf of Maine or along the eastern shore of Cape Cod as a year-round requirement. This application will have dramatic consequences for Gulf of Maine fishermen and/or fishermen fishing in vast areas east of Cape Cod and Nantucket Island.

SAPs involving required use of a haddock separator trawl should consider a better gear design – such a design is proposed to be tested by *MarineFisheries*. It is necessary for the Council to have a trawl design to meet plan objectives, i.e., allow high escapement of Georges Bank cod while fishing for haddock. At this time, Amendment 13 alternative 2 proposes mandatory use of a haddock separator trawl net defined as a "groundfish trawl modified to a vertically oriented trouser trawl configuration with two cod ends arranged one above the other with the bottom cod end left open (horizontal 6.5" square mesh minimum separating panel)."

MarineFisheries questions the effectiveness and enforceability of this requirement. Fortunately, there is an alternative. *MarineFisheries*' Conservation Engineering Program's Chief, having worked with haddock separator trawls in Europe and who understands this net type, provides the following advice for the Council to consider: *"Trawls with horizontal separator panels are not suited for commercial fishery application, and they are even more difficult to legislate. A trawl is a highly dynamic gear that in general does not allow for restrictive panels or lines. The separator trawl is good for scientific purposes, and it can be tuned to work well if it is optimized in a flume tank and adjusted at sea by means of a good net mensuration system and underwater video. But this procedure must be repeated for every new trawl with a panel (even with the same net design). Otherwise, the panel will flap down or not maintain the correct position. Moreover, if a fisherman wants to position the panel incorrectly, he can do so with ease because it is simple to change the net's geometry even when towing. The Marine Laboratory in Aberdeen that launched this idea about 20 years ago has abandoned the net design for application in commercial fisheries due to the trawl's*

complexity. The rest of Europe has done the same. It's far easier to design a trawl that fishes a fixed distance off the bottom. An added benefit is greatly reduced bottom impact caused by the footrope (sweep) and use of smaller and lighter doors."

Marine Fisheries recently completed work on the sweepless trawl as part of our efforts to achieve lower cod discards in the northeast multispecies trawl fishery. A video has been made of those experiments and a copy was sent to the Council earlier this year.

To build on this success, *MarineFisheries* is developing an industry- and environmentally-friendly species-selective haddock trawl without horizontal separator trawls. Council and NOAA Fisheries support and assistance to conduct this study is sought and seems advisable. Without this better net design, the Council will not have an effective design for SAPs.

Management Alternatives to Address Rebuilding Requirements (page I-131)

As noted in Amendment 13: *"The precise measures adopted in Amendment 13 will depend, in part, on the Council's selection of a rebuilding program. This could change the fishing mortality reduction that is needed to meet biological objectives… Changes in mortality reductions needed for either GOM or GB cod, white hake, plaice, Cape Cod yellowtail, or Mid-Atlantic yellowtail flounder are most likely to impact the selection of measures…"*

With this conclusion in mind and with *MarineFisheries*-preferred step increase in biomass targets and phased reduction in fishing mortality, consider selection of Alternative 1, Option 1: A 55% reduction in used DAS, **but**, as in option 2, phase-in this reduction from 2004-2007 with annual DAS targets being adjusted by framework action as the success of the rebuilding program is monitored. Consistent with our recommendation, Amendment 13 Table 29 would be modified to provide for 10% (2004), 10% (2005), 15% (2006), and 20% (2007) DAS reduction targets relative to used DAS in fishing year 2000/2001. A second consideration should be an evaluation of a somewhat different timetable: 10% reduction each year from 2004-2008 for a 50% reduction in used DAS.

This alternative and modified option has a 28,400 used DAS as a target and not 22,100 DAS corresponding to a 65% reduction. Large DAS reduction (including a 55% reduction) will have great socioeconomic consequences for many commercial fishermen and fishing communities; therefore, this 55% reduction should be incrementally implemented thereby providing some time to determine the effectiveness of a DAS leasing program (a central element of any DAS-reduction program), the effectiveness of other initial Amendment 13 measures as well as the consequences of Judge Kessler's actions.

Regarding DAS leasing, NOAA Fisheries' recent consideration of a DAS leasing program for the current fishing year demonstrated the great care needed to craft an effective program with few unforeseen consequences. NOAA Fisheries decided not to implement a program for the current year.

This approach (as other DAS reduction options) assumes a selection of a capacity reduction alternative to calculate a baseline or "active" DAS –also called "effective" DAS. Option 9 would be the best choice: *"Effective effort defined as the maximum DAS used in any single fishing year from FY 1996 through FY 2001. Qualifying years are*

only those in which a vessel landed 5,000 pounds or more of regulated groundfish." Resulting effective effort in DAS = 68,700 of 131,000.

This capacity control alternative is #5 (page I-126): Days-At-Sea-Reserve. Effective DAS for each vessel will be divided into Categories A and B with the former being the number of DAS available for use upon implementation of Amendment 13. Category B DAS may be reactivated from each vessel's "reserve" as stocks rebuild.

Alternative 4 ("Hard" TACs) for "Management Alternatives to Address Rebuilding Requirements:" This rebuilding alternative raises significant concern when applied to species/stocks in the multispecies complex – many of which will require separate, hard TACs with trip limits subject to change as percentages of each TAC are reached. Mechanisms to address these concerns have not yet been identified.

The first-hand experience on the Council managing New England groundfish with hard TACs from 1977-1982 must be considered. This approach was abandoned by the Council and NOAA Fisheries after years of failing to make hard TACs work. That history of groundfish management is detailed in a Council-funded 1982 report, "Development and evolution of fishery management plans for cod, haddock, and yellowtail flounder" (133 pages) written by Dr. David Pierce.

Concerns about widespread application of hard TACs in Amendment 13 follow:

Allocation: One notable consequence of 1978-1982 hard TACs for just three stocks in the complex (contrasted with the Amendment 13 option of TACs for seven stocks) was the need for allocation decisions to split TACs between vessel size categories and gear type. This was a critical consideration to deal with fairness and equity issues for small, medium, and large-sized vessels. Trip limits differed by vessel class, and they were repeatedly revised to try to prevent lengthy closures. They were unsuccessful, and they created significant regulatory discards that thwarted stock rebuilding.

Amendment 13 hasn't solved this allocation issue except to have as a preferred TAC alternative, a trimester hard TAC. Seasonal breakdowns of TACs do not appear to resolve the issues of increased rush-to-fish or derby-style fishing.

Harvesting multispecies OYs: This approach is to set a quota and when it's reached close the fishery, and there can be some success with its application in single-species fisheries or with special circumstances. But this is a "multispecies" fishery. The groundfish fishery is complex and made more complicated by the seasonal changes of groundfish distribution throughout New England, especially in the Gulf of Maine and on Georges Bank.

Consider the consequences of hard TACs for groundfish stocks. For example, a hard TAC for Cape Cod/GOM yellowtail flounder might be as low as 235 mt with a federal biomass target of 12,600 mt (compared to current 5,250 mt). Amendment 13 predicts that 70% of this TAC will be taken in less than one week. The implications of this low TAC are very serious. Either fishing in the Gulf of Maine with gear capable of catching yellowtail will be prohibited (trawls, gillnets, and scallop dredges) or possession of yellowtail will be prohibited. If the former occurs, the potential outcome is that nearly all groundfishing and scalloping will be prohibited for almost the entire year in the Gulf of Maine. The Commonwealth's fishing industry in ports adjacent to the Gulf of Maine (e.g., Gloucester and Provincetown) will be badly impacted.

If the latter (possession ban), yellowtail will still be caught in large amounts as fishermen fish for other stocks with higher TACs. Yellowtail will have to be discarded. Most will not survive, and landings will be wasted. Since the TAC is the sum of landings and discards, the TAC for the following year will be even less due to subtracting discards that occurred in the previous year.

Monitoring and fisheries data: Based on the experience of *MarineFisheries* it's very likely critical information for monitoring hard TACs will be extremely difficult to obtain, that which is obtained may become increasingly unreliable and monitoring as well as stock assessments requiring that information will suffer terribly. According to the Amendment (page I-174): "In order to effectively monitor usage of the TAC[s], the following information is needed on a daily basis: (1) catch composition for each trip (including what species are caught, where they are caught, and an estimation of how much was caught) in addition to landings data…" Therefore, the adamant opposition of fishermen to hard TACs must be considered when evaluating the feasibility of this approach given the critical importance of data for monitoring and assessments.

Incompatibility with rolling closures: Monthly area closures "roll" along the Commonwealth's coastline preventing any groundfishing by commercial vessels. For example, Amendment 13 will have closures of most of Massachusetts Bay from October through November and January through April (6 months of closure). Waters surrounding Gloucester north to and including off New Hampshire will be closed in April and May.

Fishermen dependent on these extensive waters already find themselves significantly impacted and far more than fishermen from other ports and states who are not or who are minimally impact by area closures. By superimposing hard TACs on these fishermen most, if not all of their remaining groundfishing opportunities could be lost. Fishermen from other ports and states will harvest quotas while Massachusetts Bay-dependent fishermen, especially those fishing from small vessels with little range, could be idled and lose an entire year of fishing.

Derby fishing & low prices: Experience has shown that without complicated administrative rules overlaying hard TACs, derby fisheries result, i.e., fishermen wait for the "starting gun" and race to fishing grounds to catch some share of TACs before they're taken or trip limits are reduced. This hastens the taking of TACs and lengthens closures. Initial and later attempts to slow catch rates lead to low trip limits and higher regulatory discards.

Additionally, derby fishing causes spurts of high landings and dramatically lowers fish prices to fishermen due to market gluts. Fishermen are unable to implement their personal business plans to maximize their incomes from shared quotas with many other fishermen. De facto individual fishermen's quotas (IFQs) have little value when derby fishing occurs.

Consider that a fisherman with a set amount of DAS and ruled by a low daily trip limit for cod (or any other species/stock) is allowed or "allocated" de facto a specific amount. Fishermen are not permitted to maximize that value by carefully and wisely choosing their time to fish. Instead, they must "spend" their days in economically unsound spurts.

Safety: Hard TACs and certain derby fishing cause fishermen to take risks that they otherwise will avoid. Fishing is "forced" to occur in weather and with sea

conditions posing a risk to vessel and crew. The Council's "Report from the Social Impact Informational Meetings," forming the basis for its Social Impact Analyses, makes this and other important points about the impact of hard TACs on fishing communities, families, and individuals. Those points should play an important role in determining Amendment 13 options especially in light of SFA National Standard 10: "Conservation and management measures shall, to the extent practicable [feasible], promote the safety of human live at sea." While the federal government may prioritize National Standards and give more weight to one or the other, states, especially the Commonwealth that will bear the brunt of the Amendment 13 burdens and sacrifices, must consider all National Standards as equally important.

Effort shift: Hard TACs cause effort shifts from one species to another or from one area to another thereby triggering other restrictions in response to those shifts. These shifts continue to occur in other fisheries management managed by the Council. They have occurred with past actions by the Council, e.g., increased Georges Bank restrictions causing fishermen to fish closer to shore and in the Gulf of Maine thereby increasing conflict between fishermen, especially between small, inshore and larger, offshore fishing vessels.

Increased reliance of bottom trawl survey data: Hard TACs will lead to Council managers' increased dependence on NOAA Fisheries bottom trawl survey data. These data will be critical for the setting of yearly hard. Considering the recent controversy about these surveys and that surveys were never intended to serve a quota-setting purpose, to now establish surveys as key data for setting quotas for all species in the multispecies complex is unwise. Survey data are far better suited for discerning trends in abundance – not year-to-year fluctuations.

The Council proposes to use bottom trawl survey data as proxies for SSB_{msy} for many species. That proposal is by itself controversial and questionable, but there are no other alternatives at this time for GOM haddock, Georges Bank winter flounder, white hake, pollock, windowpane flounder, and ocean pout. In summary, it's likely that hard TACs and total reliance on bottom trawl survey data as a basis for critical, annual fisheries management decisions will result in undesirable consequences for fishery resource conditions in the northeast and for the Commonwealth's fishing industry.

Alternative 2 for "Management Alternatives to Address Rebuilding Requirements:" Although Alternative 2 is the so-called "state director's option," *MarineFisheries* has grave concerns about this alternative because it's primarily based on the "TAC Backstop" provision.

The TAC backstop for some species/stocks likely will be triggered in 2004/05 especially for stocks that will have a low target TAC, such as Cape Cod/GOM yellowtail. Triggering this "backstop" will cause a cascade of events consistent with those described above including widespread closures to groundfishing, extensive regulatory discarding, and large-scale effort shifts. The goal of Amendment 13 is to end overfishing - not all fishing.

A preferred modified Alternative 1 includes management measures implemented as a result of the settlement agreement resulting from the lawsuit, Conservation Law Foundation et al. v. Evans et al. except for changes described from pages I-139-144.

However, as indicated above (under Special Access Programs), the raised footrope trawl restrictions should be deleted from section 3.6.2.6.

Alternatives to Minimize Adverse Effects of Fishing on Essential Fish Habitat

None of the alternatives appear relevant in light of new scientific data provided by the University of Massachusetts SMAST indicating that areas proposed for closures to protect habitat from bottom trawling are in areas primarily of sand and granule-pebbles ("gravel") incapable of providing stable, three-dimensional structure. Amendment 13 alternatives are based on older data and rely on major extrapolations.

SMAST recent data are visual: videos (including side profiles) taken of bottom habitat at many locations in a comprehensive, cooperative survey with the fishing industry. These data are being digitized and will soon be available for Council review. SMAST data advances are state of knowledge and provide a far superior tool to characterize these bottom areas; accordingly, these data must be factored into any decisions to locate and map habitat that should be protected from impacts of bottom trawling.

Furthermore, although the creative approach developed for the analyses is appreciated, it's doubtful that the practicability analysis is useful for selecting habitat alternatives. Ranking alternatives according to six metrics (sediment, EFH, trophic guild, species assemblage, benthic species, size/overlap) provides little insight into which alternative is best. Except for sediment rankings, the other metrics show relatively little variability. Ranking one alternative first versus second, third, etc. is based on small (and impossible to interpret) differences between alternatives.

Sediment differences appear to be primarily responsible for rankings giving options such as 3a and 3b priority consideration. But, as noted above, the "gravel" and "gravelly sand" designations contributing to these high rankings are misleading because areas of granule-pebble are called "gravel" in the practicability analyses. Therefore, many areas (including option 3a and 3b) are incorrectly identified as areas where trawling (or scallop dredging) should be prohibited.

For this Amendment, gear regulations (rock hopper/roller size restrictions) are better choices to area closures, which will be best left for the Council Omnibus Amendment for habitat protection. The Omnibus Amendment, cutting across all management plans, will benefit from SMAST work and Northeast Fisheries Science Center habitat surveys.

The aforementioned represents *MarineFisheries*' comments and preferences on many of the Amendment 13 primary alternatives and options. Given the exhaustive amount of information in the Amendment, *MarineFisheries* will continue its review and will have more to offer at the November Council meeting.